The Spill Trajectory maps display the extent of oiling over a 72-hour period. A scale is provided on the map for the time period color key. A legend to the time contour color scale is provided on each map. Shoreline impacts are identified by red markings. As a conservative factor, the shoreline characteristics have been negated to allow maximum refloating and circulation of the oil particles.

The model has incorporated weathering effects on the oil and partial loss by evaporation, and mixing with the water column. The Predicted Weathering and Fates Graph – Figure 3-5 in this section represents the relative mass balance over the 72-hour period.

Sensitivity Analysis Results

Seasonal variations have been evaluated through the stochastic model. Historical winds for the period were categorized into summer and winter seasons. Wind velocity and direction vectors representative for the seasons were evaluated creating a range of probable spill trajectories.

Generally, the regional weather has two seasonal conditions, summer and winter. In the summer, winds are dominated by the prevailing west wind and thermal induction from the valley. In the early morning and evening, winds can be light and variable. In the winter or fall, the winds are generally light and variable, with occasional stronger winds representative of passing winter storm systems. Generally, a strong wind across the tidal flow tends to act as a driving function forcing the spill out of the main tidal flow. This can result in earlier grounding on the shoreline and may result in less travel and shoreline area impact.

The Spill Contour maps represent a summary of 100 iterations of spill trajectories from various states of tidal currents and seasonal environmental factors. These results are depicted on color maps delineating contours of oiling probability. A legend to the color scale is provided on each map. Shoreline impacts are identified by red markings or by the overrun of the contour across the shoreline

For the Martinez Facility RWCD Spill Risk, the greatest shoreline impact was determined to be during the winter with the increased impact along the shoreline of Carquinez Straits and along the southeastern shoreline of San Pablo Bay. Impact during the summer is earlier and to the northern reaches of Suisun and Grizzly Bays.